MATERIAL SAFETY DATA SHEET
POULTRY VITAMINS AND ELECTROLYTES

1. Identification

1.1 Product identifier: Poultry Vitamins & Electrolytes

1.2 Other means of identification: Poultry Vitamins + Electrolytes

1.3 Recommended use and restrictions on use:
For the use as an animal vitamin supplement only. This product is not for human consumption. Refer to safety data sheet regarding safety, usage, applications, hazards, procedures and disposal of this product before use.

1.4 Manufacturer: Ameri-Pac, Inc.
745 S. 4th St.
St. Joseph, MO 64501
Phone: 816-233-4530

1.5 Emergency Number (800) 424-9300 Chemtrec
Chemtrec is available Days, Nights, Weekends, and Holidays

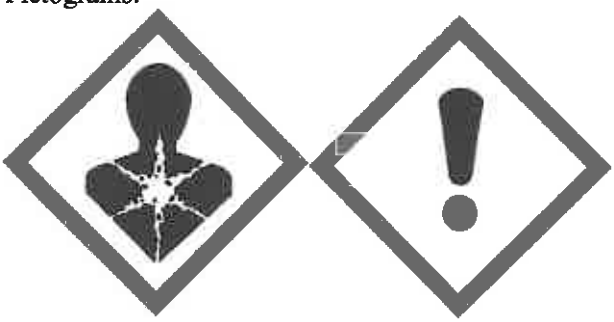
2. Hazard Identification

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation- category 2
Eye irritation - category 2A
Reproductive toxicant - category 1B
Acute aquatic toxicity - category 3

2.2 GHS Label Elements
Signal Word: Danger

Hazard Statements:
H361f Suspected of damaging the unborn child.
H402 Harmful to aquatic life
H319 Causes serious eye irritation
H315 Causes skin irritation

Pictograms:



Precautionary Statements:
Store in secured/locked area in cool dry conditions in a well-ventilated area.
Keep container tightly closed.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/eye protection/face protection/protective clothing.
Avoid breathing dust/fumes/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Avoid release into environment.
If on skin: remove contaminated clothing immediately and wash thoroughly with water.
If exposed seek medical advice/attention.
If in eyes: rinse cautiously with water for at least 15 minutes. Remove contact lenses.
If skin irritation occurs: get medical advice/attention.
Remove contaminated clothing and launder before reuse.
Dispose of contents/container in accordance with all state, local and federal regulations.
Women of childbearing potential should avoid occupational exposure.

2.3 Hazards not otherwise classified: None

3. Composition/Information on Ingredients

3.1 Name: Poultry Vitamins & Electrolytes

3.2 Common name/synonyms: Poultry Vitamins + Electrolytes

Hazardous components and concentrations in the mixture at levels which require reporting:

Component	CAS Registry Number	Amount (%)
Vitamin A acetate	127-47-9	< 2 %
Citric Acid	77-92-9	< 10%
Menadione Sodium Bisulfite	130-37-0	< 5 %
Niacinamide	98-92-0	< 15 %
Pyridoxine Hydrochloride	58-56-0	< 5%

4. First-Aid Measures

4.1 Necessary Measures

Skin: Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, seek medical attention.

Eyes: Immediately rinse eyes with running water for a minimum of 15 minutes. Seek medical attention.

Ingestion: Do not induce vomiting unless directed to do so by a medical professional. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get medical attention.

Inhalation: Move to fresh air. Aid in breathing if necessary. Seek medical attention.

4.2 Symptoms and Effects:
This mixture has not been tested as a whole. The most important symptoms and effects of exposure are listed in sections 2.2 and 11. Effects and symptoms of exposure for individual components in this mixture at levels were reporting is required are listed below.

Vitamin A Acetate: Early signs and symptoms of chronic vitamin A intoxication include fatigue, irritability, vomiting, loss of appetite, headache, vertigo, dry and pruritic skin, psychiatric changes mimicking severe depression or schizophrenic disorder, anorexia, abdominal discomfort, nausea and vomiting, mild fever, excessive sweating and dermatitis. Excess vitamin A has been associated with teratogenic effects in animals and humans. Chronic vitamin A intoxication may result in the fibrosis and cirrhosis of the liver. Hypomenorrhea, enlarged liver and spleen, cirrhosis, jaundice, urinary complaints, anemia, leukopenia, leukocytosis, and thrombocytopenia have also been reported.

Citric acid: Citric acid is generally considered innocuous, although hypocalcemic effects were reported during transfusion of large volumes of citrated blood. Frequent or excessive intake of citric acid may cause erosion of teeth and local irritation of mucous membranes. This effect also occurs with lemon juice, which contains about 7% citric acid and has a pH <3.

Menadione sodum bisulfite: Minimal data is available for this component. This component is known to be harmful by ingestion, irritant for skin, eyes, and respiratory tract.

Niacinamide: Overexposure to niacinamide may result in irritation to the eyes, skin and respiratory system. Small oral doses of niacinamide are usually nontoxic.

Pyridoxine Hydrochloride: Pyridoxine is usually nontoxic; however, chronic administration of large dosages has been associated with adverse neurologic effects. Nausea, headache, paresthesia, somnolence, and increased serum AST (SGOT) and decreased serum folic acid concentrations have been reported.

4.3 Indication of Immediate medical attention and special treatment needed: Refer to section 4.1

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5. Fire-fighting Measures

5.1 Suitable extinguishing media: Alcohol foam, carbon dioxide, dry chemical

5.2 Specific hazards arising from the chemical: Not applicable

5.3 Special protective equipment and precautions for fire-fighters: Use approved self-contained breathing apparatus with full facemask and full protective equipment in confined areas. Use water to keep fire-exposed containers cool.

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6. Accidental Release Measures

6.1 Personnel precautions, protective equipment and emergency procedures:
Use local exhaust to control vapors and mists.
Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Methods and materials for containment and cleanup:
Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Pickup and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.
For disposal see section 13.

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7. Handling and Storage

7.1 Precautions for safe handling:
Practice good industrial hygiene when handling this product.
Avoid inhalation of dust, vapor and mist.
For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities:
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Incompatibilities:
Strong oxidizers

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8. Exposure controls/Personal Protection:

8.1 Components with workplace control parameters:

Component	CAS No.	Value	Control parameters	
Amorphous silicon dioxide	112926-00-8	TWA	5 mg/m³ (respirable)	OSHA Table Z-1
		TWA	15 mg/m³ (total dust)	OSHA Table Z-1

8.2 Appropriate engineering controls:
Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday. When at all possible, institute controls to minimize the exposure and risk of exposure by all means of contact.

8.3 Individual protection measures
Eye/Face Protection:

Select tightly fitting safety goggles, safety glasses or faceshield (8-inch minimum) as appropriate. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin Protection:
Handle with gloves. Select gloves which are compatible with components listed in this mixture. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
Dispose of contaminated gloves after use in a ccordance with applicable laws and good industrial hygiene practices. Wash and dry hands.

Body Protection:
Protective clothing impervious to chemicals.

Respiratory Protection:
Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator, dust mask or half-respirator with the appropriate respirator cartridges or filters as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH. Respirators must be selected with consideration to assessment of risk and in accordance with 29 CFR 1910.134.

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9. Physical and Chemical Properties

9.1 Appearance:
Physical State: Free flowing granular powder
Color: Yellow

9.2 Odor: None

9.3 Odor threshold: No data available

9.4 pH: No data available

9.5 Melting point/freezing point: No data available

9.6 Initial boiling point and boiling point range: No data available

9.7 Flash point: No data available

9.8 Evaporation rate: No data available

9.9 Flammability: No data available

9.10 Upper/lower flammability or explosive limits: No data available

9.11 Vapor pressure: No data available

9.12 Vapor density: No data available

9.13 Relative density: No data available

9.14 Solubility: Soluble in water

9.15 Partition coefficient: No data available

9.16 Auto-ignition temperature: No data available

9.17 Decomposition temperature: No data available

9.18 Viscosity: No data available

9.19 Specific Gravity: No data available

9.20 Bulk Density: No data available

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10. Stability and Reactivity

10.1 Reactivity: No data available

10.2 Chemical stability: Stable at normal operating temperatures.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Solutions of citric acid if in contact with reactive metals such as iron, zinc, or aluminum, form hydrogen gas which may form explosive mixtures.

10.5 Incompatible materials: Oxidizing agents, Sulfuric acid, Reactive metals

10.6 Hazardous decomposition Products: No data available

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11. Toxilogical Information:

11.1 Likely routes of exposure:
Inhalation, skin contact and eye contact are likely. Ingestion is possible, but less likely.

11.2 Symptoms related to physical, chemical and toxilogical characteristics: Refer to section 4.2

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure: Refer to section 4.2

11.4 Numerical measures of toxicity: This mixture has not been tested for health effects or toxicity as a whole. Estimates of toxicity based on individual ingredients and composition in the mixture and used in the GHS classification are listed below if available.

Acute toxicity:
No data available

Skin corrosion/irritation:
No data available

Serious eye damage/irritation:
No data available

Respiratory or skin sensitization:
No data available

Germ cell mutagenicity:
No data available

Reproductive toxicity:
Vitamin A acetate: Presumed human reproductive toxicant (category 1B)

Damage to fetus possible

Reproductive toxicity - rat - Oral

1. Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Growth statistics (e.g., reduced weight gain).

2. Presumed human reproductive toxicant

Developmental Toxicity - rat - Oral

1. Effects on Embryo or Fetus: Other effects to embryo.

2. Specific Developmental Abnormalities: Respiratory system.

3. Effects on Embryo or Fetus: Cytological changes (including somatic cell genetic material).

4. Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear.

5. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Specific target organ toxicity – single exposure:
No data available

Specific target organ toxicity – repeated exposure:
No data available

Aspiration hazards:
No data available

Carcinogenicity:
This product does not contain components that are classifiable to carcinogenicity based on NTP, IARC, or OSHA classification.

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12. Ecological Information:

This product has not been tested for the ecological considerations listed below. The GHS classification is based on the following components toxicity.

12.1 Ecotoxicity:
Potassium chloride: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 880 mg/L - 96h
mortality NOEC - Pimephales promelas (fathead minnow) - 500 mg/L - 7 d
mortality LOEC - Pimephales promelas (fathead minnow) - 1,000 mg/L – 7

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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13. Disposal Consideration

13.1 Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Determine waste status prior to disposal in accordance with federal, state and local regulations.

13.2 Contaminated packaging
Dispose of as unused product

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14. Transport Information

14.1 DOT (US)
Not dangerous goods

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15. Regulatory Information

15.1 SARA 302 components:
No chemicals in this mixture are subject to the reporting requirements of SARA Title III, Section 302.

15.2 SARA 313 components:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.3 SARA 311/312 hazards:
Acute health hazard, Chronic health hazard

15.4 New Jersey Right to Know components:
Retinyl acetate (Vitamin A acetate), Citric acid, Potassium chloride, Sodium chloride, Menadione sodium bisulfite, Biotin, Thiamine hydrochloride, Riboflavin, 4-O-β-D-Galactopyranosyl-α-D-glucopyranose monohydrate, Gelatin, Ethoxyquin, Silica – amorphous precipitated, Sunflower oil, Glycerol 1-stearate, Glucose, Vitamin D3, Silicic acid, Peanut oil, DL-α-Tocopherol acetate, D-Calcium pantothenate, Folic acid, Nicotinamide (Niacinamide), Pyridoxine hydrochloride, Magnesium sulfate, Cyanocobalamin (Vitamin B12)

15.5 Pennsylvania Right to Know components:
Retinyl acetate (Vitamin A acetate), Citric acid, Potassium chloride, Sodium chloride, Menadione sodium bisulfite, Biotin, Thiamine hydrochloride, Riboflavin, 4-O-β-D-Galactopyranosyl-α-D-glucopyranose monohydrate, Gelatin, Ethoxyquin, Silica – amorphous precipitated, Sunflower oil, Glycerol 1-stearate, Glucose, Vitamin D3, Silicic acid, Peanut oil, DL-α-Tocopherol acetate, D-Calcium pantothenate, Folic acid, Nicotinamide (Niacinamide), Pyridoxine hydrochloride, Magnesium sulfate, Cyanocobalamin (Vitamin B12)

15.6 Massachusetts Right to Know components:
Silica – amorphous precipitated

15.7 California Prop. 65 components:
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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16. Other Information

16.1 Preparation information:
Revision: Original
Revision date: 10/21/2014
Approval date: 11/6/2014
Replaces revision: None
Replaces revision date: None
SDS code: CE009

16.2 Further information:
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of knowledge and is applicable to the product with regard to appropriate safety precautions. No expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product and not to such product in combination with any other product. Ameri-Pac, Inc. disclaims all liability for actions taken for forgone reliance of such data.